

Title (en)
DOUBLE-ACYLATED GLP-1 DERIVATIVES

Title (de)
ZWEIFACH ACYLIERTE GLP-1-DERIVATE

Title (fr)
DÉRIVÉS À DOUBLE ACYLATION DE GLP-1

Publication
EP 2513140 A1 20121024 (EN)

Application
EP 10788095 A 20101216

Priority
• US 28860109 P 20091221
• EP 09179390 A 20091216
• EP 2010069932 W 20101216
• EP 10788095 A 20101216

Abstract (en)
[origin: US2011166321A1] The invention relates to a derivative of a GLP-1 analogue, which analogue comprises a first K residue at a position corresponding to position 37 of GLP-1(7-37) (SEQ ID NO: 1), a second K residue at a position corresponding to position 26 of GLP-1(7-37), and a maximum of ten amino acid modifications as compared to GLP-1(7-37), wherein the first K residue is designated K37, and the second K residue is designated K26, which derivative comprises two albumin binding moieties attached to K26 and K37, respectively, wherein the albumin binding moiety comprises a protracting moiety selected from: $\text{HOOC}-(\text{CH}_2)_x-\text{CO}-^*$ Chem. 1: $\text{HOOC}-\text{C}_6\text{H}_4-\text{O}-(\text{CH}_2)_y-\text{CO}-^*$ Chem. 2: $\text{R}_1-\text{C}_6\text{H}_4-(\text{CH}_2)_z-\text{CO}-^*$ Chem. 3: $\text{HOOC}-\text{C}_4\text{SH}_2-(\text{CH}_2)_w-\text{CO}-^*$ Chem. 4: in which x is an integer in the range of 6-18, y is an integer in the range of 3-17, z is an integer in the range of 1-5, R₁ is a group having a molar mass not higher than 150 Da, and w is an integer in the range of 6-18; with the proviso that when the protracting moiety is Chem. 1, the albumin binding moiety further comprises a linker of formula Chem. 5: $^*-\text{NH}-(\text{CH}_2)_2-(\text{O}-(\text{CH}_2)_2)_k-\text{O}-(\text{CH}_2)_n-\text{CO}-^*$, wherein k is an integer in the range of 1-5, and n is an integer in the range of 1-5; or a pharmaceutically acceptable salt, amide, or ester thereof. The invention also relates to the pharmaceutical use thereof, for example in the treatment and/or prevention of all forms of diabetes and related diseases, as well as to corresponding novel peptides and side chain intermediates. The derivatives are suitable for oral administration.

IPC 8 full level
C07K 14/605 (2006.01); **A61K 47/48** (2006.01)

CPC (source: CN EP KR US)
A61K 38/00 (2013.01 - EP US); **A61K 38/26** (2013.01 - KR); **A61K 47/50** (2017.07 - KR); **A61K 47/542** (2017.07 - EP US); **A61K 47/60** (2017.07 - EP US); **A61P 1/00** (2017.12 - EP); **A61P 1/04** (2017.12 - EP); **A61P 1/14** (2017.12 - EP); **A61P 1/18** (2017.12 - EP); **A61P 3/04** (2017.12 - EP); **A61P 3/06** (2017.12 - EP); **A61P 3/08** (2017.12 - EP); **A61P 3/10** (2017.12 - EP); **A61P 5/48** (2017.12 - EP); **A61P 5/50** (2017.12 - EP); **A61P 9/00** (2017.12 - EP); **A61P 9/10** (2017.12 - EP); **A61P 15/00** (2017.12 - EP); **A61P 15/08** (2017.12 - EP); **A61P 43/00** (2017.12 - EP); **C07K 14/575** (2013.01 - KR); **C07K 14/605** (2013.01 - CN EP KR US); **C07K 14/65** (2013.01 - US); **C12N 15/00** (2013.01 - KR); **A61K 38/00** (2013.01 - CN); **G01N 2333/605** (2013.01 - US)

Citation (search report)
See references of WO 2011080103A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 2011166321 A1 20110707; US 8648041 B2 20140211; AU 2010338387 A1 20120531; AU 2010338387 B2 20141023; BR 112012014475 A2 20180424; BR 112012014475 A8 20180703; CA 2784757 A1 20110707; CN 102655883 A 20120905; CN 102686607 A 20120919; CN 102686607 B 20141029; CN 102791731 A 20121121; CN 102791731 B 20160420; CN 104311657 A 20150128; CN 104311657 B 20201208; CN 104327182 A 20150204; CN 104327182 B 20200417; CN 111560060 A 20200821; DK 2513140 T3 20160118; EP 2512518 A1 20121024; EP 2513140 A1 20121024; EP 2513140 B1 20151104; EP 2513141 A2 20121024; EP 2513141 B1 20170301; EP 3000482 A1 20160330; EP 3000482 B1 20210421; ES 2561658 T3 20160229; ES 2625735 T3 20170720; HU E027229 T2 20160829; IL 219945 A0 20120731; IL 219945 A 20161229; JP 2013144684 A 20130725; JP 2013514322 A 20130425; JP 2013514323 A 20130425; JP 2013514324 A 20130425; JP 2016094473 A 20160526; JP 5411366 B2 20140212; JP 6006118 B2 20161012; JP 6194176 B2 20170906; KR 101817607 B1 20180111; KR 20120103650 A 20120919; MX 2012006634 A 20120621; PL 2513140 T3 20160429; PT 2513140 E 20160311; RU 2012128547 A 20140127; RU 2559540 C2 20150810; TW 201127396 A 20110816; TW I484974 B 20150521; US 2012329711 A1 20121227; US 2013053311 A1 20130228; US 2014179899 A1 20140626; US 8815802 B2 20140826; US 9556250 B2 20170131; WO 2011073328 A1 20110623; WO 2011080102 A2 20110707; WO 2011080102 A3 20110909; WO 2011080103 A1 20110707; ZA 201204436 B 20130828

DOCDB simple family (application)
US 97019610 A 20101216; AU 2010338387 A 20101216; BR 112012014475 A 20101216; CA 2784757 A 20101216; CN 201080057056 A 20101216; CN 201080057082 A 20101216; CN 201080057110 A 20101216; CN 201410482563 A 20101216; CN 201410482902 A 20101216; CN 202010234195 A 20101216; DK 10788095 T 20101216; EP 10788095 A 20101216; EP 10790788 A 20101216; EP 10793244 A 20101216; EP 15188731 A 20101216; EP 2010069929 W 20101216; EP 2010069931 W 20101216; EP 2010069932 W 20101216; ES 10788095 T 20101216; ES 10790788 T 20101216; HU E10788095 A 20101216; IL 21994512 A 20120523; JP 2012543757 A 20101216; JP 2012543758 A 20101216; JP 2012543759 A 20101216; JP 2013030695 A 20130220; JP 2016021671 A 20160208; KR 20127015873 A 20101216; MX 2012006634 A 20101216; PL 10788095 T 20101216; PT 10788095 T 20101216; RU 2012128547 A 20101216; TW 99144174 A 20101216; US 201013516311 A 20101216; US 201013516312 A 20101216; US 201314101618 A 20131210; ZA 201204436 A 20120615